

FOO ET AL.
"Matrix Display Having Addressable
Display Elements And Methods"
Atty. Docket No. CS22497RA

Appl. No. 10/647,723
Confirm. No. 2166
Examiner V. Kovalick
Art Unit 2629

R E M A R K S

Request for Reconsideration, Informal Matters, Claims Pending

The non-final Office action mailed on 17 October 2006 has been considered carefully. Reconsideration of the claimed invention in view of any amendments above and the discussion below is respectfully requested.

Claim 7, previously dependent on Claim 6, was amended to depend from Claim 5, which was previously amended to include the limitations of Claim 6.

Claims 1-5, 7-17 and 19-20 are pending.

Allowability of Claims Over Yasukawa, Crossland & Hilbrink

Rejection Summary

Claim 1 stands rejected under 35 USC 103(a) as being unpatentable over by U.S. Publication No. 2003/0210363 (Yasukawa) taken with U.S. Patent No. 5,408,248 (Crossland) in view of U.S. Patent No. 4,641,135 (Hilbrink).

Discussion of Claim 1

Regarding Claim 1, the prior art fails to disclose or suggest a

... method of activating a display element of a display device having $n \times m$ array of display elements, each display element coupled to a logic controlled switch, the method comprising:

applying a row address input and a row electrode input to control logic of the logic controlled switch of the display element;

applying a column address input and a column electrode input to the control logic of the logic controlled switch of the display element;

activating the display element with the logic controlled switch when the row address and row electrode inputs and when the column address and column electrode inputs satisfy a condition.

There is no motivation or suggestion to combine Yasukawa, Crossland and Hilbrink as suggested by the Examiner. Yasukawa is concerned with reducing flickering and degradation of image quality caused by stray light in TFT switched displays. In Yasukawa, pixel electrodes turn on TFT to write image signals applied to the TFT when scanned. A parallel capacitor (70) connected to the TFT reduces leakage of the image signal.

Crossland teaches refreshing an LCD cell by reversing the polarity of the voltage applied thereto. It's unclear that the polarity reversing scheme of Crossland could be used to refresh the TFT of Yasukawa, thus raising question over whether the putative combination would have had a reasonable expectation of success. The asserted combination of Yasukawa and Crossland nevertheless fails to suggest applying row/column address and row/column electrode inputs to control logic of the logic controlled switch of the display element.

Hilbrink discloses the use of diode pairs to charge and discharge a field effect picture element. Contrary to the Examiner's suggestion, the diode-based pixel driver system of Hilbrink is not suitable for driving the TFT LCD cells of Yasukawa and Crossland.

Yasukawa in combination with Crossland and Hilbrink nevertheless fail to disclose or suggest "... activating the display element with the logic controlled switch when the row address and row electrode inputs and when the column address and column electrode inputs satisfy a condition. Claim 1 is thus patentably distinguished over the art.

Allowability of Claims Over Yasukawa, Crossland, Hilbrink & Martin

Rejection Summary

Claims 10-12 and 16 stands rejected under 35 USC 103(a) as being unpatentable over by U.S. Publication No. 2003/0210363 (Yasukawa) taken with U.S. Patent No. 5,408,248 (Crossland) in view of U.S. Patent No. 4,641,135 (Hilbrink) and U.S. Patent No. 6,094,704 (Martin).

Allowability of Claim 10

Regarding Claim 10, the prior art fails to disclose or suggest a

... display device comprising:
a plurality of display elements arranged in a matrix,
each display element including a display pixel coupled to a switch,
each display element including an addressable latch having an output coupled to a controlling input of the switch,
the addressable latch having a row address input and a column address input.

There is no motivation or suggestion to combine Yasukawa, Crossland and Hilbrink as suggested by the Examiner. Yasukawa is concerned with reducing flickering and degradation of image quality caused by stray light in TFT switched displays. In Yasukawa, pixel electrodes turn on TFT to write image signals applied to the TFT when scanned. A parallel capacitor (70) connected to the TFT reduces leakage of the image signal.

Crossland teaches refreshing an LCD cell by reversing the polarity of the voltage applied thereto. It's unclear that the polarity reversing scheme of Crossland could be used to refresh the TFT of Yasukawa, thus raising question over whether the putative combination would have had a reasonable expectation of success. The asserted combination of Yasukawa and Crossland nevertheless fails to suggest applying row/column address and row/column electrode inputs to control logic of the logic controlled switch of the display element.

Hilbrink discloses the use of diode pairs to charge and discharge a field effect picture element. Contrary to the Examiner's suggestion, the diode-based pixel driver system of Hilbrink is not suitable for driving the TFT LCD cells of Yasukawa and Crossland.

The TFT of Yasukawa, Crossland or Hilbrink do not require use of an addressable latch and moreover combining a latch with these references as suggested by the Examiner does not address the any of the problems with which these references are concerned. Moreover, the Examiner has failed to propose any reasoning for the asserted combination other than to meet the limitations of Claim 10. The asserted rationale fumes of hindsight reconstruction, which is improper.

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No reasonable combination of Yasukawa, Crossland, Hilbrink and Martin disclose or suggest the display device of Claim 10. Claim 10 is thus patentably distinguished over the art.

Allowed & Allowable Claims

Claims 5, 7-9, 17 and 19-20 stand allowed.

Claims 2-3 and 13-15 were indicated as being allowable but stand objected to for dependence on a rejected base or intermediate claim. These claims are also believed to be in condition for allowance in light of the discussion above.

Prayer For Relief

In view of any amendments and the discussion above, the Claims of the present application are in condition for allowance. Kindly withdraw any rejections and objections and allow this application to issue as a United States Patent without further delay.

Respectfully submitted,

/ R K Bowler/

ROLAND K. BOWLER II 17 JAN. 2007
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MOTOROLA, INC.
INTELLECTUAL PROPERTY DEPT. (RKB)
600 NORTH U.S. HIGHWAY 45, W4-37Q
LIBERTYVILLE, ILLINOIS 60048

TELEPHONE NO. (847) 523-3978
FACSIMILE NO. (847) 523-2350